

**Claims:**

1. Use of CD154 for the detection and/or isolation of antigen-specific T lymphocytes.
2. The use according to claim 1, characterized in that the T lymphocytes being detected and/or isolated are CD4<sup>+</sup> and/or CD8<sup>+</sup> T lymphocytes.
3. The use according to claim 1 or 2, characterized in that inflammatory, anti-inflammatory, regulatory and/or suppressive T lymphocytes are detected and/or isolated.
4. A method for the detection and/or isolation of antigen-specific T lymphocytes in a suspension following activation with an antigen, in which method the suspension is contacted with a CD40/CD154 system inhibitor, intra- or extracellular determination of CD154 is effected, and the cells having CD154 are detected and/or separated.
5. The method according to claim 4, characterized in that the T lymphocytes being detected and/or isolated are CD4<sup>+</sup> and/or CD8<sup>+</sup> T lymphocytes.
6. The method according to any of claims 4 or 5, characterized in that an anti-CD40 antibody, an anti-CD154 antibody, substances blocking CD40 or CD154, a secretion

inhibitor and/or endocytosis inhibitor are used as CD40/CD154 system inhibitor.

7. The method according to any of claims 4 to 6, characterized in that brefeldin A and/or monensin are used as secretion inhibitor and/or endocytosis inhibitor.
8. The method according to any of claims 4 to 7, characterized in that detection of CD154 is intracellular or extracellular in or on fixed cells.
9. The method according to any of claims 4 to 8, characterized in that detection of CD154 is intracellular or extracellular in or on vital cells.
10. The method according to any of claims 4 to 9, characterized in that T lymphocytes lacking a defined cytokine pattern are isolated and/or separated.
11. The method according to any of claims 4 to 10, characterized in that inflammatory, anti-inflammatory, regulatory and/or suppressive T lymphocytes are detected and/or isolated and used in cellular therapies for preventive or causal treatment of infectious, allergic, inflammatory, malignant and/or autoimmune diseases.
12. The method according to any of claims 4 to 11, characterized in that inflammatory, anti-inflammatory, regulatory and/or suppressive T lymphocytes are detected and/or isolated and used in cellular therapies for preventive or causal

treatment of diseases selected from the group comprising rheumatoid arthritis, multiple sclerosis, systemic lupus erythematosus, scleroderma, vasculitides, reactive arthritis, ankylosing spondylitis, uveitis, Morbus Crohn and/or diabetes.